UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,234	04/17/2006	Amanda Proudfoot	ARS-108	1629

23557 7590 04/15/2008

SALIWANCHIK LLOYD & SALIWANCHIK
A PROFESSIONAL ASSOCIATION
PO BOX 142950
GAINESVILLE, FL 32614-2950

EXAMINER	
DANG, IAN D	

ART UNIT	PAPER NUMBER
1647	

MAIL DATE	DELIVERY MODE
04/15/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/540,234	PROUDFOOT ET AL.	
	Examiner	Art Unit	
	IAN DANG	1647	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 January 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) *11,12 and 20-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11,12 and 20-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 June 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Application, Amendments and/or Claims

The amendment of 01/31/2008 has been entered in full. Claims 1-10 and 13-19 have been cancelled and claims 11, 12, 20-22 have been amended. Claims 23-26 have been newly added.

Claims 11, 12, and 20-26 are pending and under examination.

Specification

Although Applicants have amended the title of the invention, the objection is maintained in view to the new amendments made to the claims. The title should be drawn to the claims reciting a treatment for reducing ALT in a patient.

Claim Objections

Claims 11, 20, and 26 are objected to because of the following informalities:

The amendments made to claim 11 and the cancellation of claims 15-16 have overcome the objections made to claims 11-12, 15-16, and 20-22.

In addition, claims 20 and 26 are missing "an" before immunoglobulin. The claims should recite "an" immunoglobulin constant region.

Appropriate correction is required.

35 USC § 112 (Second paragraph)

Applicant's amendments made to claim 11 and cancellation of claims 15-16 filed on 01/31/2008 have overcome the rejection of claims 11, 12, 15, 16, 20-22 under 35 USC § 112, Second paragraph. The rejection of claims 11, 12, 15, 16, 20-22 under 35 USC § 112, Second

paragraph has been withdrawn.

Claim Rejections - 35 USC § 112 (Written Description)

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 11-12 and 20-22 remain rejected under 35 U.S.C. 112, first paragraph and the newly added claims 23-26 are now rejected under 35 U.S.C. 112, first paragraph as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 11-12 and 20-22 remain rejected under 35 U.S.C. 112, first paragraph and the newly added claims 23-26 are now rejected under 35 U.S.C. 112, first paragraph for the reasons of record on pages 5-9 of the Office action mailed 10/31/2007.

At page 6 of the response, Applicants have indicated in the as-filed specification CC-chemokines having reduced GAG-binding activity are known in the art, the domains/amino acids associated with such reduced GAG-binding are also known and methods of substituting (e.g., conservatively or non-conservatively) amino acid residues known to be associated with reduced GAG-binding area with other amino acids are also known (see specification at page 5, line 15 through page 7, line 5).

Applicant's arguments have been fully considered but are not found persuasive. First, only one Triple's 40 CCL5/RANTES mutant is known in the art. The reference by Proudfoot et

al., an inventor of the instant application, (2001, Journal of Biological Chemistry, Volume 276, Issue 14, pages 10620-10626) teach that the mutations of the cluster of basic residues, ^{44}RKNR^{47} with alanine residues reduced the selectivity of RANTES binding to different GAGs. One member of the genus of CCL5/RANTES chemokine mutant is not representative for the genus encompassing numerous chemokine mutants that include derivative, conjugate or complex of the mutant as recited in claim 21.

In addition, the discussion in the specification on how to make chemokine mutants with methods of substituting amino acids does not meet the requirement for written description because such a disclosure does not constitute a disclosure of a representative number of members. No such homologues were made or shown to have activity. Only the polypeptide of SEQ ID NO:1 is disclosed. The specification's general discussion of making variants constitutes an invitation to experiment by trial and error. Such does not constitute an adequate written description for the claimed CCL5/RANTES chemokine mutant.

Moreover, the specification has not provided any structural identifying characteristics of the CCL5/RANTES chemokine mutant utilized in the method. While Applicants have provided the functional characteristics of chemokine mutant, Applicants have not provided sufficient disclosure regarding the structural identifying characteristics of the chemokine mutant utilized in the claimed method. The specification does not provide any disclosure regarding the number of amino acids changes, the identities of the amino acids and the location of these changes for the claimed CCL5/RANTES chemokine mutant while still retaining a biological function. The instant claims are not limited to conserved substitutions as disclosed in the specification and the claims also recite “derivates” which haven’t been defined in the specification.

Claim Rejections - 35 USC § 112 (Enablement)

Claims 11-12 and 20-22 remain rejected under 35 U.S.C. 112, first paragraph (Enablement) and the newly added claims 23-26 are now rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method for reducing serum alanine amino transferase (ATL) in a subject with hepatitis comprising the administration of the CCL5/RANTES mutant triple 40's of SEQ ID NO:1 does not reasonably provide enablement for a method for reducing serum alanine amino transferase (ATL) in a subject with hepatitis comprising the administration of a variant of a triple 40's CCL5/RANTES mutant including the variants comprising SEQ ID NO:1. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make/use the invention commensurate in scope with these claims.

Claims 11-12 and 20-22 remain rejected under 35 U.S.C. 112, first paragraph and the newly added claims 23-26 are now rejected under 35 U.S.C. 112, first paragraph for the reasons of record on pages 9-18 of the Office action mailed 10/31/2007.

At page 8 of the response, Applicants argue that compliance with the enablement requirement is not precluded even if some experimentation is necessary. Further, a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed to enable the determination of how to practice a desired embodiment of the invention claimed. In this respect, it is submitted that the as-filed specification provides adequate guidance as to any experimentation that should proceed in order to identify 40's triple mutants of CCL5 containing amino acid residues other than alanine and that exhibit reduced GAG-binding activity. Indeed, the as-filed specification provides

teachings as to which residues should be changed in accordance with the teachings of the specification as well as those amino acids that can be inserted into those amino acid residue positions (see specification at pages 6-7).

Applicant's arguments have been fully considered but are not found persuasive. Although Applicants can have routine experimentation, the claimed invention requires undue experimentation because the recitation of the claimed CCL5/RANTES chemokine mutant utilized in the claimed method has excessive breadth and lack guidance. The recited chemokine mutant in claim 11 and 21 encompasses any variants, derivatives, conjugates, or complexes of the mutant. The specification provides one CCL5/RANTES chemokine mutant, the 40's triple mutant, and methods on making variants of chemokine mutants. While the specification provides general teachings on to how make variants of the mutant chemokine with methods using amino acid substitutions, the specification has not provided any structural identifying characteristics of the mutant that is able to reduce serum alanine aminotransferase in a subject. While the specification provides a mutant of SEQ ID NO:1, the specification does not provide any specific amino acids to be substituted in the sequence of the CCL5/RANTES chemokine mutant or to the mutant of SEQ ID NO:1 while retaining its ability to reduce GAG binding activity. Thus, the claimed method requires undue experimentation because one of skill in the art would not know how the use the claimed treatment method, since the required structural characteristics of the CCL5/RANTES chemokine mutant used in the method are not sufficiently disclosed in the specification. The enablement requirement requires Applicants to provide sufficient guidance to "make and use" the claimed invention and not "make and test" the claimed invention. Applicants have only provided one working example, SEQ ID NO:1, and no other guidance as to what critical residues are required in order to retain the claimed function of

the mutant and that due to this it is not predictable as to what residues can be altered other than those shown in SEQ ID NO:1.

In addition, Applicants are not enabled for any CC-chemokine mutant derivative recited in claim 21 because the term "derivative" is not defined and can encompass any types of alterations to the protein. In the specification Applicants have provided guidance regarding the chemokine mutant of SEQ ID NO:1 but not any alterations or substitutions to any chemokine mutant or to the mutant of SEQ ID NO:1.

Conclusion

No claim is allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to IAN DANG whose telephone number is (571)272-5014. The examiner can normally be reached on Monday-Friday from 9am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Manjunath Rao can be reached on (571) 272-0939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ian Dang
Patent Examiner
Art Unit 1647
April 7, 2008

/Robert Landsman/
Primary Examiner, Art Unit 1647